Arrow
AC3 Optimus Intra-Aortic Balloon Pump
Greater precision with increased simplicity; an evolution in IABP performance
Unmatched simplicity, right from the start

The AC3 Optimus Intra-Aortic Balloon Pump is up and running with the push of a button. Set up is fast and easy, guided by visual prompts on the large high-definition touchscreen— including confirmation that therapy can be initiated. In AutoPilot Mode, the AC3 Optimus IABP automatically adjusts timing and triggering parameters, freeing clinicians to focus on the patient rather than the pump. A simple touch of the waveform provides access to controls, including the option to adjust volume.
Proprietary algorithms drive accuracy and precision

The remarkable performance of the AC3 Optimus IABP is based upon AutoPilot Mode, which uses a trio of proprietary algorithms. Individually, they help address key challenges; together, they help improve the clinical efficacy of IABP therapy and simplicity with which it’s delivered.5

- WAVE Inflation Timing
- Deflation timing management
- Best signal analysis

Accurate deflation timing
Among the most real-time, comprehensive, and accurate timing methods available today. Automated deflation timing management ensures accurate and safe deflation timing.

Effective IABP therapy improves left ventricular performance
Once the IABP is turned on, the PV loop indicates lower pressure and increased stroke volume. The IABP acutely improves LV performance, primarily by afterload reduction and subsequent reduction in preload.4,6 Simply turning the pump on increases stroke volume by as much as 18%–22% within just 4 beats which subsequently improves cardiac output.4,6 This direct patient benefit is evident in the PV loop shown below.

Initiating Therapy

Up to 200 bpm
Provides precise and accurate support for patients with the most severe arrhythmias and heart rates as high as 200 bpm.1
More than advanced, approachable

With a highly-advanced software platform and proprietary suite of algorithms, the AC3 Optimus Intra-Aortic Balloon Pump delivers outstanding haemodynamic support across a wide range of patient conditions. A user-friendly design, intuitive interface, and state-of-the-art AutoPilot Mode makes it incredibly simple to use. With this powerful combination, Teleflex has elevated counterpulsation therapy while making it more accessible than ever.

- **Alarm history and trends feedback**
  Allows quick review of past alarms and ability to assess repeated alarms

- **Touchscreen**
  Allows for fast and easy interaction. Action bar combines assessment and action in a single location

- **Waveform**
  New touchscreen access to waveform controls

- **Graphics**
  Simple green, yellow, and red graphics allow for clear communication of parameter status

- **Routine tasks**
  Startup checklist provides simple and quick confirmation that setup is complete. The therapy status report provides a fast, single page summary of patient and pump settings for simple and accurate charting

Key actions and assessments made easy and accessible:

**Getting Started**

1) Check Helium Supply
   Helium Verified
2) Connect ECG and AP
   Trigger Verified
3) Connect IAB
   IAB Volume: 40cc

**FOS (Optional)**

1) FOS Sensor Connected
2) FOS CAL Data Read (Loaded)
3) Auto Zero in Progress
4) Auto Zero is Complete, Insert IAB

**AP Waveform Present**

**Dynamic Startup Checklist**

An interactive review of the three step startup and confirmation when the pump is ready to start.

**Therapy Status**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>HR</td>
<td>81 bpm</td>
</tr>
<tr>
<td>SYS (A/U)</td>
<td>118 / -- mmHg</td>
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<tr>
<td>AUG</td>
<td>100 mmHg</td>
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<tr>
<td>DIA (A/U)</td>
<td>101 / -- mmHg</td>
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<tr>
<td>MAP (A/U)</td>
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<tr>
<td>Assist Ratio</td>
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<tr>
<td>BVOL</td>
<td>40.0 cc</td>
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<tr>
<td>Trigger Mode</td>
<td>Afib</td>
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<td>Mode</td>
<td>Autopilot</td>
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<tr>
<td>Timing Method (I/D)</td>
<td>Wave / RWave</td>
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<td>Timing Settings</td>
<td>30 msec - RWave</td>
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<tr>
<td>Alarms</td>
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</tbody>
</table>

**Therapy Report**

One-button summary of patient haemodynamics (response to IABP therapy) and therapy settings. Allows for one key stroke charting, with ability to print reports.
Understanding and managing alarms is crucial to patient safety and clinician productivity. The AC3 Optimus IABP offers an advanced configuration to deliver on both counts.

- 360° visibility of alarm severity
- Expanded alarm history review
- New corner switch to identify IABP alarming and alarm priority
- Alarms are active at all pump speeds offering faster response in AutoPilot Mode than user in Operator mode

AutoPilot Mode is automatically activated when therapy is initiated, providing full support from the first beat. It begins with full-assist and full volume at startup, and immediately begins monitoring and managing signals.

As innovators in intra-aortic balloon pumping technology, we continue to advance the performance and reliability of automated therapy.

### Third-generation AutoPilot Mode – dynamic and adaptive for intra-beat adjustments

Patient conditions can be ever-changing – maintaining optimal therapy requires continuous monitoring and adjustment. The third-generation AutoPilot Mode of the AC3 Optimus IABP makes it easy to track, sense, and adapt to changing conditions without any clinician intervention. Our exclusive Best Signal Analysis identifies the best signal for triggering and timing and implements adjustments with speed and precision beyond that of a manual operator.

### Advanced alarms for enhanced safety and confidence

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### Enhancing outcomes, optimising value

Beyond its obvious clinical value, the AC3 Optimus IABP offers low cost of ownership. As budget pressures continue to grow, the cost-effective features like these become increasingly appealing:

- Pneumatic drive system with no scheduled replacement parts
- Low component replacement costs
- Minimal service required

### References:

Teleflex is a global provider of medical technologies designed to improve the health and quality of people's lives. We apply purpose driven innovation – a relentless pursuit of identifying unmet clinical needs – to benefit patients and healthcare providers. Our portfolio is diverse, with solutions in the fields of vascular and interventional access, surgical, anesthesia, cardiac care, urology, emergency medicine and respiratory care. Teleflex employees worldwide are united in the understanding that what we do every day makes a difference. For more information, please visit teleflex.com.

Teleflex is the home of Arrow, Deknatel, Hudson RCI, LMA, Pilling, Rüsch, and Weck – trusted brands united by a common sense of purpose.

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